Before the

DEC 16 12 11 PM 196

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C. 20554

MAIL FILE COPY ORIGINAL

DISPATCHED BY

| | | |
|---|---|---|
| **In the Matter of** | ) | |
| | ) | |
| **Implementation of Section 273 of the Communications Act of 1934, as amended by the Telecommunications Act of 1996** | ) | **CC Docket No. 96-254** |
| | ) | |
| | ) | |
| | ) | |

## NOTICE OF PROPOSED RULEMAKING

Adopted: December 10, 1996 Released: December 11, 1996

Comment Date: 30 Days after publication of this Notice in the *Federal Register.*
Reply Comment Date: 30 Days after the Comment Date.

By the Commission:

### Table of Contents

## I. INTRODUCTION AND BACKGROUND

1. On February 8, 1996, the Telecommunications Act of 1996 ("1996 Act") became law.[1] Through this legislation, Congress sought to establish a "pro-competitive, de-regulatory national policy framework" for the United States telecommunications industry.[2] The 1996 Act includes provisions that are intended to promote competition in markets that are already open to new competitors. Congress entrusted to this Agency the responsibility for establishing the rules that will implement most quickly and effectively the national telecommunications policy embodied in the 1996 Act.[3] For example, Section 271 permits the Bell Operating Companies ("BOCs") to provide long distance, inter-LATA telecommunications services if they are able to meet certain statutory and regulatory requirements.[4] Section 273 permits BOCs to engage in manufacturing, if certain requirements are met that are designed to promote competition and prevent anticompetitive behavior (including discrimination in the procurement of telecommunications equipment).

2. A telecommunications monopolist subject to regulation under a rate-of-return or similar system may have incentives to pay a manufacturing affiliate inflated prices even for potentially inferior equipment, thereby transferring profits from its regulated to unregulated activities.[5] In addition, by favoring its own manufacturing affiliate with preferential network information and inequitable procurement processes, the monopolist could place unaffiliated manufacturers at a competitive disadvantage so as to further increase its manufacturing affiliate's profits.[6] Such concerns led the government to prosecute two separate antitrust actions against the Western Electric Co. and AT&T, litigation that spanned most of the last 50

---

[1] The Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 96 (1996) (codified at 47 U.S.C. §§ 151 *et seq.*).

[2] *Jt. Statement of Managers*, S. Conf. Rep. No. 104-230, 104th Cong., 2d Sess. 1 (1996) ("Joint Explanatory Statement").

[3] According to Representative Fields, "[Congress] is decompartmentalizing segments of the telecommunications industry, opening the floodgates of competition through deregulation, and most importantly, giving consumers choice . . . and from these choices, the benefits of competition flow to all of us as consumers -- new and better technologies, new applications for existing technologies, and most importantly . . . lower consumer price." 142 Cong. Rec. H1149 (Feb. 1, 1996) (statement of Rep. Fields).

[4] *See, e.g.*, 47 U.S.C. §§ 271, 272.

[5] Huber, Peter W., *The Geodesic Network: 1987 Report on Competition in the Telephone Industry*, §§ 14.12-14.13 (1987); *cf.* Spulber, Daniel F., *Deregulating Telecommunications*, 12 YALE J. ON REG. 25 (1995) (arguing that the BOCs no longer should be subject to manufacturing prohibitions because technological and market changes in the telecommunications industry have made such prohibitions unnecessary).

[6] Huber, *The Geodesic Network*, §§ 14.12-14.13.

years.[7]

3. Under the 1982 AT&T Consent Decree,[8] the BOCs were foreclosed from manufacturing telecommunications equipment and customers premises equipment ("CPE").[9] Those prohibitions were premised on a concern that, if the BOCs were permitted to manufacture telecommunications equipment, they "would have an incentive to subsidize the prices of their equipment with the revenues from their monopoly services as well as to purchase their own equipment, even though it was more expensive and not of the highest quality."[10] The prohibition also reflected the concern that, if the BOCs were permitted to manufacture CPE, they "would have substantial incentives to favor their own manufacturing arms by providing to them information regarding changes in network standards, thus permitting them to gain an advantage over non-affiliated manufacturers. In addition, they could subsidize the price of this equipment with revenues from the exchange monopoly."[11]

---

[7] *See United States v. Western Electric Co.*, Civil Action No. 17-49 (D.N.J. filed Jan. 14, 1949) (the "Western Electric action") (transferred to the United States District Court for the District of Columbia in 1982 and docketed as Civil Action No. 82-0192); *United States v. AT&T*, Civil Action No. 74-1698 (D.D.C. filed Nov. 20, 1974) (the "AT&T action"). These suits sought a variety of structural and ownership separations between or among AT&T, its wholly-owned manufacturing subsidiary, Western Electric, and its research arm, Bell Telephone Laboratories, and led to the entry of consent decrees in 1956 and 1982 that contained safeguards designed to reduce these dangers. The Commission, in 1977, concluded that the 1956 consent decree afforded inadequate protections and ordered AT&T to propose improvements to then-current practices. *American Tel. and Tel. Co. and the Associated Bell System Companies Charges for Interstate Telephone Service, (Phase II Final Decision and Order)*, Docket No. 19129, 64 F.C.C.2d 1, 26-45 (1977). For a more detailed discussion of the history of the court actions discussed in this footnote, *see United States v. American Tel. and Tel. Co.*, 552 F. Supp. 131, 135-147 (D.D.C. 1982), *aff'd sub nom. Maryland v. United States*, 460 U.S. 1001 (1983).

[8] The "AT&T Consent Decree" is defined in the 1996 Act to mean "the order entered August 24, 1982, in the antitrust action styled *United States v. Western Electric*, Civil Action No. 82-0192, in the United States District Court for the District of Columbia, and includes any judgment or order with respect to such action entered on or after August 24, 1982." 47 U.S.C. § 153(3). We use the terms "AT&T Consent Decree" and "Consent Decree" in this Notice as defined in the 1996 Act, and not to refer to the 1956 consent decree.

[9] *United States v. American Tel. and Tel. Co.*, 552 F. Supp. at 190. Telecommunications equipment is "equipment, other than customer premises equipment, used by a carrier to provide telecommunications services." 552 F. Supp. at 229 (AT&T Consent Decree, Section IV(N)); *cf.* 47 U.S.C. § 153(45). Customer premises equipment is "equipment employed on the premises of a person (other than a carrier) to originate, route, or terminate telecommunications, but does not include equipment used to multiplex, maintain, or terminate access lines." 552 F. Supp. at 228 (AT&T Consent Decree, Section IV(E)); *see also* 47 U.S.C. § 153(14).

[10] *Id.* at 190.

[11] *Id.* at 191. Although not permitted to manufacture CPE, the BOCs were permitted "to market" CPE (*id.* at 192) and, under the language of the AT&T Consent Decree, "to provide" CPE (*id.* at 225). These terms are coextensive. *United States v. Western Elec. Co.*, 675 F. Supp. 655, 665-66 (D.D.C. 1987), *aff'd*, 894 F.2d 1387 (D.C. Cir. 1990).

4. The Consent Decree's manufacturing prohibitions created an environment in which new market entrants have made the telecommunications equipment and CPE markets increasingly competitive. Section 273 seeks to facilitate BOC entry into manufacturing while preserving the competitive nature of these markets by permitting a BOC to manufacture telecommunications equipment and CPE only after the BOC: (1) has been authorized to provide inter-LATA service pursuant to Section 271(d) (which, *inter alia*, requires the BOC to have demonstrated that it has implemented certain network access provisions contained in Section 271(c)(2)(B) and that BOC provision of interLATA service is in the public interest);[12] (2) has established a separate subsidiary that complies with Section 272 (which contains certain structural safeguards and other provisions to facilitate detection of prohibited acts as well as to prevent discrimination and cross-subsidization);[13] and (3) has met the requirements of Section 273 (which, *inter alia*, requires BOC disclosure of certain technical information, prohibits discriminatory equipment procurement decisions, and imposes constraints on certain standards-setting, and certification, entities).[14]

5. Section 273(a) provides that "a Bell operating company may manufacture and provide telecommunications equipment, and manufacture customer premises equipment if the Commission authorizes that Bell operating company or any Bell operating company affiliate to provide interLATA services under section 271(d), subject to the requirements of [Section 273] and regulations prescribed under Section 273."[15] BOCs must also comply with Section 272, which specifies that BOCs may manufacture only through an affiliate that is separate from the operating company. This Notice of Proposed Rulemaking ("NPRM") proposes to implement Section 273, consistent with the pro-competitive, de-regulatory goals of the 1996 Act.[16]

6. In this NPRM, we propose a framework that is intended to encourage robust competition for manufactured products through the increased availability of network and planning information and fair and open forums for establishing equipment standards and for certifying equipment. We note that this proceeding does not seek to modify definitions of terms such as "registration" covered by Part 68 of the Commission's rules or "certification" or "specifications" as they appear in Part 2. Sections 273(a) and (b) set specific statutory requirements for BOC entry into manufacturing and authorize collaboration for research and

[12] 47 U.S.C. § 273(a).

[13] 47 U.S.C. § 272(a)(2)(A).

[14] 47 U.S.C. § 273(a).

[15] Section 271(d) establishes the procedure by which a BOC may be authorized by the Commission to offer in-region interLATA services.

[16] *See* Joint Explanatory Statement, at 1. In the Conference Report, the Joint Explanatory Statement of the Committee of Conference is set out immediately following the text of the 1996 Act.

royalty agreements with other non-BOC manufacturers. Section 273(c) requires BOCs to make available to competing manufacturers and interconnecting carriers information on technical requirements, protocols and network planning. Section 273(d) prohibits the entry of Bell Communications Research, Inc. ("Bellcore") into customer premises equipment and telecommunications equipment manufacturing "as long as [Bellcore] is an affiliate of more than one otherwise unaffiliated [BOC] or successor or assign of any such company."[17] Section 273(d) also provides manufacturing safeguards that are applicable to certain entities that certify, or establish standards for, telecommunications equipment, customer premises equipment, or industry-wide generic requirements for the use of that equipment. Section 273(d) also contains alternative dispute resolution procedures, which we have already addressed in a separate order.[18] Section 273(e) imposes competitive safeguards to govern BOC equipment procurement and sales, and Sections 273(f) and (g) grant the Commission authority to enforce the provisions of the statute and the Commission's regulations implementing Section 273.

7. This rulemaking is one of a number of interrelated proceedings designed to advance competition and to reduce regulation in telecommunications markets.[19] We ask commenters in this proceeding to bear in mind the relationships among these parallel proceedings and to frame their proposals within the pro-competitive, de-regulatory context of the 1996 Act as a whole. In addition, we request that interested parties comment on the assumptions, tentative conclusions, conclusions, and specific questions that are contained in this Notice, as well as all other aspects of Section 273 that should shape our efforts to implement this statute or that may otherwise affect the interests of commenting parties. In doing so, parties also may wish to consider possible implications of this proceeding on international activities and negotiations currently underway to reduce or eliminate barriers to international trade in telecommunications equipment or CPE that are associated with standards and certification processes in other countries. We also request assessments of the costs and benefits of any regulations that are proposed by parties to this proceeding as well as those that are identified in this Notice.

---

[17] 47 U.S.C. § 273(d)(1)(B).

[18] *Implementation of Section 273(d)(5) of the Communications Act of 1934, as Amended by the Telecommunications Act of 1996 -- Dispute Resolution Regarding Equipment Standards*, Report and Order, 11 FCC Rcd 12955 (1996).

[19] *See, e.g., Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket 96-98, First Report and Order, FCC 96-325 (rel. Aug. 8, 1996); *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, Second Report and Order and Memorandum Opinion and Order, FCC 96-333 (rel. Aug. 8, 1996); *Federal State Joint Board on Universal Service*, CC Docket 96-45, Recommended Decision, FCC 96-93 (rel. Nov. 8, 1996).

## II. DISCUSSION

### A. Section 273(a): BOC Manufacturing Authorization

8. Section 273(a) explicitly authorizes BOCs and BOC affiliates[20] to "manufacture and provide" telecommunications equipment,[21] and "manufacture" customer premises equipment[22] once they obtain authority to offer in-region, interLATA service under Section 271(d) and comply with any other rules and regulations that result from this proceeding. We tentatively conclude that Section 273(a) allows a BOC to manufacture and provide telecommunications equipment and to manufacture CPE, in compliance with the rules we adopt in this proceeding, once that BOC has obtained authority to offer interLATA service in any of its in-region states. This tentative conclusion is consistent with the legislative history of the 1996 Act, which states that a BOC may engage in manufacturing "after the Commission authorizes the company to provide interLATA services under new section 271(d) in any in-region state."[23] We seek comment on this tentative conclusion.

9. Section 273(a) also states that "neither a Bell operating company nor any of its affiliates may engage in such manufacturing in conjunction with a Bell operating company not so affiliated or any of its affiliates."[24] BOCs under the ownership or control of a common

---

[20] The term "Bell operating company" is defined in the 1996 Act, and includes the successors and assigns of Bell operating companies that provide "wireline telephone exchange service," but does not include an "affiliate" of a Bell operating company, other than another Bell operating company or its successor or assigns. 47 U.S.C. § 153(4). "Affiliate" is defined in the 1996 Act, 47 U.S.C. § 153(1), to mean a person that directly or indirectly owns or controls, is owned or controlled by, or is under common ownership or control with, another person. For the purpose of determining affiliate status under Section 153(1), "owned" means an equity interest of more than ten percent. 47 U.S.C. § 153(1). For Bellcore, however, the equity interest creating an affiliate relationship with a BOC is significantly less. *See* note 24, *infra.*

[21] "Telecommunications equipment" means "equipment, other than customer premises equipment, used by a carrier to provide telecommunications services, and includes software integral to such equipment (including upgrades)." 47 U.S.C. § 153(45).

[22] "Customer premises equipment" means "equipment employed on the premises of a person (other than a carrier) to originate, route, or terminate telecommunications." 47 U.S.C. § 153(14).

[23] Joint Explanatory Statement at 154.

[24] Section 273(d)(1)(B) precludes Bellcore from becoming a BOC manufacturing affiliate, but allows for limited BOC ownership of Bellcore under Section 273(d)(8)(A). The latter paragraph states "[t]he term 'affiliate' shall have the same meaning as in Section 3 of this Act, except that, for purposes of paragraph (1)(B) -- (i) an aggregate voting equity interest in Bell Communications Research, Inc., of at least 5 percent of its total voting equity, owned directly or indirectly by more than 1 otherwise unaffiliated Bell operating company, shall constitute an affiliate relationship; and (ii) a voting equity interest in Bell Communications Research, Inc., by any otherwise unaffiliated Bell operating company of less than 1% of Bell Communications Research's total

Regional Holding Company ("RHC") would appear to meet the statutory definition of "affiliates;" therefore, we tentatively conclude that this provision prevents joint manufacturing between or among (1) unaffiliated RHCs; (2) unaffiliated BOCs that are not under the ownership or control of a common RHC; and (3) an RHC and a BOC that is not affiliated with that RHC. We seek comment on this tentative conclusion.

10. Section 273(h) defines the term "*manufacturing*" to have "the same meaning as such term has under the AT&T Consent Decree." The U.S. District Court for the District of Columbia, which supervised the Decree, determined that the terms "manufacture" and "manufacturing" extend to the "design, development and fabrication"[25] of telecommunications equipment, CPE, and the "software integral to [this] equipment hardware, also known as firmware."[26] Although Section 273 defines only the gerund "manufacturing," we tentatively conclude that we should also accord the verb "manufacture" a meaning that extends to include the activities identified by the District Court and that is consistent with the definition of "manufacturing" provided in the statute. We seek comment on this interpretation.

### B. Section 273(b): BOC Collaboration and Research and Royalty Agreements

11. Notwithstanding the restrictions on BOC entry into manufacturing imposed by Section 273(a), Section 273(b) explicitly permits BOCs to collaborate with manufacturers, engage in research activities related to manufacturing, and enter into royalty agreements with manufacturers. Specifically, Section 273(b)(1) permits a BOC to engage "in close collaboration with any manufacturer of customer premises equipment or telecommunications equipment during the design and development of hardware, software, or combinations thereof related to such equipment." We seek comment on the types of activities that would constitute "close collaboration" permissible under this section. Consistent with our tentative conclusion in paragraph 9, above, we tentatively conclude that the broad language of Section 273(b)(1) does not permit close collaboration in either of the following two situations: (1) between a BOC or an RHC and the manufacturing affiliate of another unaffiliated BOC or RHC; or (2) between the manufacturing affiliates of two unaffiliated BOCs or RHCs. Conversely, we tentatively conclude that Section 273(b)(1) does permit joint collaboration between a BOC-affiliated manufacturer and a non-BOC affiliated manufacturer. We request comment on these tentative conclusions.

12. Section 273(b)(2) also permits BOCs, notwithstanding the conditions imposed by Section 273(a), to "(A) engage[] in research activities related to manufacturing; and (B)

---

voting equity shall not be considered to be an equity interest under this paragraph."

[25] *United States v. Western Elec. Co.*, 675 F. Supp. at 662.

[26] *Id.* at 667 n.54.

enter[] into royalty agreements with manufacturers or telecommunications equipment." The 1996 Act does not define the terms "research activities" or "royalty agreements;" the terms are related, however, in that a BOC will have less incentive to engage in research absent an expectation that it will be able to maintain ownership and control of any intellectual property or proprietary information it is able to develop, and collect royalties from licensees. Accordingly, we seek appropriate definitions for the terms "research activities" and "royalty agreements" that will preserve BOC incentives to research and develop innovative products, solutions and technologies, consistent with the language of Section 273(b)(2). For instance, a "royalty" can be defined in the patent context as "sums paid to [the] owner of a patent for its use or for the right to operate under it."[27] It may also be defined more broadly, however, as "compensation for the use of property . . . expressed as a percentage of receipts from using the property or as an account per unit produced."[28] A broad interpretation would give the BOCs wider latitude in structuring business transactions, and minimize regulatory interference in the market. We recognize, however, that allowing BOCs to collect royalties associated with licensing of intellectual property could potentially create some of the same anticompetitive incentives that would be created if the BOCs themselves engaged in manufacturing directly. For instance, if the BOC's royalty is paid per unit of sales, or tied to the purchase price of the equipment, the BOC may have substantial incentives to favor equipment on which it can collect a royalty, even if such equipment is inferior to competing equipment in quality or higher in price, because: (1) the BOC will collect a royalty on its own purchases, lowering its net cost of the equipment; and (2) the BOC's purchases may encourage other carriers to purchase the same equipment, in order to maintain full interoperability and interconnectivity with the BOC's network. In implementing this section, we seek definitions of the statutory terms that, to the extent possible, are narrow enough to minimize such anticompetitive incentives. We also seek comment on other ways to protect against potential anticompetitive abuses, such as those described above. In addition, we seek comment on the relationship between Section 273(b)(2) and other sections of the Act which may require disclosure of information, including, but not limited to, Sections 251(c)(5), 251(e)(2), or 273(c)(1).

### C. Section 273(c): BOC Information Requirements

13. Information with respect to the technical characteristics of a network is essential for manufacturers of telecommunications equipment and CPE. Telecommunications equipment and CPE manufacturers' products cannot be used in or with a network unless they comply with the technical specifications and protocols necessary for incorporation in or

[27] BLACK'S LAW DICTIONARY 1331 (6th ed. 1990).

[28] *Id.* at 1330

interoperation with that network.[29] Changes in technical specifications, protocols or both can foreclose competition or render potential competition less likely if an affiliated manufacturer can learn of such changes and then modify, or create new, products to be compatible with those changes in advance of the rest of the market.[30] For example, by successively manufacturing, and thereafter disclosing the availability of telecommunications equipment or CPE that is dependent upon changes in network specifications, a BOC could have a significant head-start, possibly even foreclosing other manufacturers from offering CPE or telecommunications equipment in its telephone exchange service markets. In this way, a decision to delay publication of changes in its network's technical specifications or protocols could be used anticompetitively to disadvantage existing, as well as potential, manufacturers of telecommunications equipment and CPE.

14. Access to information about technical characteristics and specifications is also important in networks where users value a product more highly if other users adopt that product as well.[31] For example, the availability of open technical specifications for the exchange of electronic mail through the Internet, which allows users of many different types of networks to send messages to and receive messages from each other, has greatly enhanced the value and use of electronic mail. The value of leading proprietary word processing document formats is enhanced because many other users are able to read files that are created in that format. Once a standard becomes widely accepted, however, an owner of the intellectual property rights to that standard potentially could (1) impose significant licensing fees on other users, reflecting the standard's high value attributable to such network externalities, and competitors' and users' needs for access to that standard; or (2) profitably exclude competitors from the use of the standard.

15. Our *Computer Inquiry III* rules recognize some of these concerns by, *inter alia*, requiring carriers offering enhanced services or providing customer premises equipment to disclose to the public "all information relating to network design and technical standards and information affecting changes to the telecommunications network which would affect either intercarrier interconnection or the manner in which customer premises equipment is attached

---

[29] *United States v. AT&T*, 552 F. Supp. at 190-91; *Computer and Business Equip. Mfrs. Assoc. Petition for Declaratory Ruling Regarding Section 64.702(d)(2) of the Commission's Rules and the Policies of the Second Computer Inquiry*, Report and Order, 93 F.C.C.2d 1226, 1236-37 (1983).

[30] *See generally*, Carl Shapiro, Antitrust in Network Industries, Address before the American Bar Association (March 27, 1996). We will place a copy of this address in the docket file of this proceeding.

[31] For a description of the characteristics of network markets, *see* Bensen, Stanley M. and Joseph Farrell, *Choosing How to Compete: Strategies and Tactics in Standardization*, J. OF ECON. PERSP., Vol. 8, No. 2 (Spring 1994) at 118-19.

to the interstate network prior to implementation and with reasonable advance notification."[32] In addition, the Commission's "all carrier" rule obligates "all carriers owning basic transmission facilities [to release] all information relating to network design . . . to all interested parties on the same terms and conditions, insofar as such information affects either intercarrier interconnection or the manner in which interconnected [customer-premises equipment] operates."[33] The Commission's rules also require carriers to disclose network changes to customers "[i]f such changes can be reasonably expected to render any customer's terminal equipment incompatible with telephone company communications facilities, or require modification or alteration of such terminal equipment, or otherwise materially affect its use or performance"[34] Common carriers have also filed network specifications as part of their tariffs so that customers may select from among features offered with a package of services. To the extent that the notice and filing requirements imposed on carriers by the 1996 Act (including, especially, Sections 273(c)(1) and 273(c)(4)) may duplicate these or other existing Commission notice and filing requirements related to network interconnection, we seek comment on suggestions to consolidate those requirements and the proposed text of rules that would achieve that objective.

16. The legislative safeguards of Section 273(c) reduce the potential for anticompetitive conduct that might otherwise accompany the information advantage enjoyed by a network owner that also manufactures network equipment.[35] Section 273(c) requires the BOCs to disclose certain information relating to their network standards. Disclosure of that

---

[32] 47 C.F.R § 64.702(d)(2). *See, e.g., Amendment to Sections 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry); and Policy and Rules Concerning Rates for Competitive Common Phase II Carrier Service and Facilities Authorizations Thereof*, Report and Order, 2 FCC Rcd 3072, 3087 (1987) ("*Phase II Order*")., *recon.*, 3 FCC Rcd 1150 (1988) ("*Phase II Reconsideration Order*"), *further recon.*, 4 FCC Rcd 5927 (1989) ("*Phase II Further Reconsideration Order*"); *Phase II Order vacated sub. nom. California v. FCC*, 905 F.2d 1217 (9th Cir. 1990) ("*California I*"); *Computer III Remand Proceeding*, 5 FCC Rcd 7719 (1990) ("*ONA Remand Order*"), *recon.*, 7 FCC Rcd 909 (1992), *pets. for review denied sub. nom. California v. FCC*, 4 F.3d 1505 (9th Cir. 1993) ("*California II*"); *BOC Safeguards Order*, 6 FCC Rcd 7571 (1991), *vacated in part and remanded sub. nom. California v. FCC*, 39 F.3d 919 (9th Cir. 1994) ("*California III*"), *cert. denied*, 115 S. Ct. 1427 (1995).

[33] *Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry)*, Memorandum Opinion and Order on Reconsideration, 84 F.C.C.2d 50, 82-83 (1980), *further recon.*, 88 FCC 2d 512 (1981), *aff'd sub nom. Computer and Communications Indus. Ass'n v. FCC*, 693 F.2d 198 (D.C. Cir. 1982), *cert. denied*, 461 U.S. 938 (1983).

[34] 47 C.F.R. § 68.110(b). Certain past references to this rule also use the term "all carrier rule." In this proceeding, we use that term to refer to our part 64 rule, above, and refer to 47 C.F.R. § 68.110(b) specifically by number, if necessary.

[35] *See* Joint Explanatory Statement at 154.

information may promote competition by facilitating interconnectivity[36] and interoperability,[37] alerting competitors and others to changes in standards, and preventing the imposition of unreasonable licensing fees by the BOCs.[38]

17. Although the information disclosure requirements of Section 273(c) apply on their face to all BOCs, Section 273(c) is contained within a statute that otherwise addresses BOC obligations in the manufacturing context. We seek comment on whether Section 273(c) applies to all BOCs or only to BOCs that are authorized to manufacture under Section 273(a).

18. *Section 273(c)(1):* Section 273(c)(1) requires a BOC, "in accordance with regulations prescribed by the Commission, [to] *maintain and file* with the Commission full and complete information with respect to the protocols and technical requirements for connection with and use of its telephone exchange service facilities."[39] A BOC also is required to "report promptly to the Commission any material changes or planned changes to protocols and technical requirements for connection with and use of its telephone exchange service." We seek comment on how each of the terms in this subsection that are not defined by the 1996 Act (such as "protocols" and "technical requirements") should be defined. Because our current rules regarding network information, discussed above, address the needs of other carriers, information service providers ("ISPs"), enhanced service providers ("ESPs"), and other members of the public for information about network capabilities,[40] and not the specific needs of manufacturers who wish to develop new network products, we tentatively conclude that our existing rules do not satisfy the filing requirements of Section 273(c)(1).

---

[36] The 1996 Act defines "public telecommunications network interconnectivity" as "the ability of two or more public telecommunications networks used to provide telecommunications service to communicate and exchange information without degeneration, and to interact in concert with one another." 47 U.S.C. § 256(d).

[37] In the context of Section 251(c)(5), we recently defined "interoperability" as "the ability of two or more facilities, or networks, to be connected, to exchange information, and to use the information that has been exchanged." *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, Second Report and Order and Memorandum Opinion and Order, FCC 96-333, at ¶ 178 (*citing IEEE Standard Dictionary of Electrical and Electronics Terms* 461 (J. Frank ed. 1984)).

[38] *Cf.* 47 U.S.C. § 251(c), which imposes specific interconnection obligations on incumbent LECs. *Inter alia*, Section 251 obligates incumbent LECs to negotiate interconnection agreements in good faith (Section 251(c)(1)), requires that interconnection be provided "on rates, terms, and conditions that are just, reasonable and nondiscriminatory" (Section 251(c)(2)(D)), and requires that incumbent LECs provide reasonable public notice of changes in necessary information (Section 251(c)(5)). Accordingly, Sections 251(c) and 273(c) appear to overlap to some extent.

[39] 47 U.S.C. § 273(c)(1) (emphasis supplied). *Compare* this provision with the all carrier rule and 47 C.F.R. § 68.110(b), above.

[40] *See, e.g.*, 47 C.F.R. §§ 64.702(d)(2), 68.110(b).

We seek comment on the need for specific disclosure rules to implement Section 273(c) in light of this tentative conclusion, as well as the specific language that commenters may conclude should appear in them.

19. Although Section 273(c)(1) mandates full disclosure of the protocols and technical requirements used for network connection, in network markets, the announcement of the impending availability of a product prior to its actual availability also may have anticompetitive effects.[41] For example, potential consumers may delay or forego purchase of competing equipment based on publication of anticipated capabilities of products currently under development. Advance publicity that either substantially misstates the capabilities of a product, as actually released or significantly misstates the availability date may exacerbate this effect. Accordingly, the precise timing of the disclosure of information concerning changes in the technical specifications or protocols for connection with, and use of, a BOC's facilities may have a substantial effect on the operations of BOC competitors that provide, or contemplate providing, telecommunications equipment, CPE, and network services. While the potential harm associated with early disclosure in this context may not be as great as those associated with excessive secrecy, we seek comment on the potential effects of early disclosure of products, protocols or technical requirements. Specifically, we request that commenters address: (1) whether early disclosure or late disclosure of information has a greater potential to damage the operations of carriers, manufacturers, and other market participants; (2) the extent to which early disclosure of planned products, technical specifications, or protocols could stifle the development of competing products, technical specifications, or protocols; (3) whether any provision of the Communications Act fully addresses the potential problems associated with early disclosure; and (4) whether we should exempt *bona fide* equipment trials from Section 273(c)(1)'s disclosure requirements, as we did in the context of carriers' Section 251(c)(5) network disclosure obligations.[42]

20. The BOCs are required to "maintain" the information described in Section 273(c)(1) in addition to filing it with the Commission. We tentatively conclude that, in fulfilling their obligation to "maintain" this information, the BOCs must keep it "full and complete," accurate, and up-to-date. In addition, because the BOCs' obligation to "maintain" this information is contained within a section of a statute otherwise addressing public disclosure requirements through Commission filings, we tentatively conclude that each BOC must keep the relevant information within its service area in a form that is available for inspection by the public upon reasonable request. By doing so, the BOCs would: (1) maintain the information in a form that is available at a location physically close to those parties that

---

[41] *See, e.g., id.* at 123-24; Farrell, Joseph, and Garth Saloner, *Installed Base and Compatibility: Innovation, Product Preannouncements, and Predation*, AMER. ECON. REV., Vol. 76, No. 5 at 940-55 (Dec. 1986).

[42] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, Second Report and Order and Memorandum Opinion and Order, FCC 96-333, at ¶ 260.

are most likely to need it; and (2) promote competition by making the information more widely available than it would be if the Commission were the sole source. We seek comment on this tentative conclusion. We also seek comment on how long we should require the BOCs to "maintain" this information.

21. All of the BOCs now have sites on the Internet that are easily accessible to millions of users around the world. We tentatively conclude that one method by which the BOCs could satisfy their obligation to "maintain" information in accordance with Section 273(c)(1) would be by placing the information on their publicly-accessible World Wide Web sites or by making files available through other Internet protocols, such as FTP, Gopher, or electronic mail. We seek comment on this tentative conclusion, including comment on (1) whether we should impose requirements on BOCs choosing to use such Internet postings concerning the format and location of material to ensure that competitors can access the necessary files easily; and (2) whether information that cannot be made available as plain ASCII text could be posted using cross-platform formats such as Postscript or PDF (Adobe Acrobat), allowing users to view or print materials with freely-available "reader" software.

22. Section 273(c)(1) also requires the BOCs to "report promptly to the Commission any material changes or planned changes" to the information described in that section. We seek comment both on when and how such reports must be filed. For instance, we have recently concluded that network changes in the context of Section 251(c)(5) should be disclosed at the "make/buy" point because, at that point, carriers' plans are sufficiently developed to provide adequate and useful guidance to competing service providers.[43] Disclosure of changes at the "make/buy" point, however, may not fully address the information needs of manufacturers. Information provided at the "make/buy" point may come too late for a rival manufacturer that might otherwise attempt to offer a competing product that can serve a similar function to the product the BOC has chosen to manufacture or purchase. In addition, unlike Section 251(c)(5), which mandates the disclosure of certain network "changes," Section 273(c)(1) requires disclosure of "planned changes." We seek comment, therefore, on whether a different disclosure standard would be appropriate in the context of Section 273(c)(1). We also seek comment on the potential use by the BOCs of alternative methods of reporting to the Commission changes in protocols or technical requirements, such as the use of electronic mail.

23. We request that commenters submit draft rules implementing the information filing, maintenance, and disclosure requirements contained in Section 273(c)(1) including, for those parties advocating the use of Internet capabilities in the context of Section 273(c)(1), specific language that we should adopt to implement this option. In addition, we request comment on whether the FCC should provide information on its own Internet site, in the form of actual files and/or hypertext links to BOC Internet sites, to create a central on-line point of

[43] *Id.* at ¶ 223.

contact for materials describing technical requirements and protocols.

24. We seek to ensure that the benefits of innovation will continue to occur within and throughout the BOCs' networks, and the networks of those entities that seek to interconnect to BOC networks. To ensure that adequate information is available to achieve this objective, we also seek comment on proposed rules to require disclosure of technical information and protocols at the highest level of disaggregation feasible. By "highest level of disaggregation feasible," we mean the most complete disclosure that is possible or practical. We recognize, however, that there may be costs associated with disclosure at that level and we accordingly seek comment on the costs and benefits of requiring maximum disclosure at the highest level of detail possible or practical. For instance, inadequate disclosure of information may make interconnection with other carriers difficult, limit inter-network performance, or fail to meet the level of "full and complete" disclosure mandated by Section 273(c)(1). However, read most broadly, Section 273(c)(1) could obligate BOCs to disclose otherwise proprietary or confidential information, including information on experimental standards, protocols, or technical requirements. Such disclosures themselves, if mandated, could inhibit innovation or competition; these considerations implicate both the level of information, and the timing of the disclosure discussed above.[44] We encourage parties to propose general disclosure rules that are tied to clear, conceptual demarcation points that will not stifle innovation or competition in the provision of equipment or software. We are concerned that, without such rules, the full benefits of competition and competitive innovation may not be available to the American public on a continuing basis. In this regard, we also seek comment discussing the extent to which the costs and benefits of alternative approaches to the implementation of Congress's disclosure mandate can be meaningfully measured, and we seek objective measurements of those costs and benefits, to the extent possible.

25. Section 251(c)(5) requires all incumbent local exchange carriers, including all BOCs, "to provide reasonable public notice of changes in the information necessary for the transmission and routing of services using that local exchange carrier's facilities or networks, as well as of any other changes that would affect the interoperability of those facilities and networks." We have recently adopted rules implementing this provision and describing incumbent LECs' network disclosure obligations under Section 251(c)(5).[45] In light of these obligations, we seek comment on the relationship between the filing and information disclosure requirements of Section 273(c)(1), Section 251(c)(5), and our existing disclosure

[44] Our existing rules governing information flow may address this concern to some extent. *See, e.g.*, 47 C.F.R. §§ 68.110(b), 64.702(d)(2); *Phase II Order*, 2 FCC Rcd at 3087; *Furnishing of Customer Premises Equipment by the Bell Operating Companies*, 2 FCC Rcd 143, 149-51 (1987), *modified on recon.*, 3 FCC Rcd 22 (1987).

[45] *See Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Second Report and Order and Memorandum Opinion and Order, FCC 96-333, at ¶¶ 165-260.

requirements under the rules discussed above.[46] Specifically, we seek comment on (1) the degree of specificity of information that we should require the BOCs to disclose and the timing of that disclosure; (2) whether compliance with the network disclosure obligations of Section 251(c)(5), as implemented by the Commission, would satisfy the information disclosure requirements of Section 273(c)(1); and (3) the text of proposed rules that would govern disclosure of this information.

26. *Section 273(c)(2):* Section 273(c)(2) bars BOCs from disclosing "any information required to be filed under [Section 273(c)(1)] unless "that information has been filed promptly, as required by regulation by the Commission." We interpret this requirement to mean that BOCs may not disclose information described in Section 273(c)(1) until the BOC has made that information publicly available by filing it with this Commission. We request comment on this interpretation.

27. We note that Section 273(b)(1) permits the BOCs to engage in "close collaboration with any manufacturer of customer premises equipment or telecommunications equipment during the design and development of hardware, software, and combinations thereof related to such equipment." There is a tension between this subparagraph and the more general information disclosure requirement contained in Section 273(c)(1). Under Section 273(c)(1), each "Bell Operating Company shall, in accordance with regulations prescribed by the Commission, maintain and file with the Commission full and complete information with respect to the protocols and technical requirements for connection with and use of its telephone exchange facilities." To ensure compliance with Section 273(c)(1), we seek to prevent "close collaboration" from resulting in the communication of technical information and protocols in advance of the disclosure requirement that is contained in Section 273(c)(2).[47] Our concern is based upon the potential for a BOC or BOC affiliate (which could include another LEC or group of affiliated LECs) to have a competitive advantage through such "close collaboration," *e.g.*, access to network information that would be unavailable or not available in a timely manner to other competitors. At the same time, we do not want to stifle innovation that requires close collaboration. While Section 273(b)(1) permits close collaboration, we note that Section 273(g) provides that this Commission "may prescribe such additional rules and regulations as the Commission determines are necessary to carry out the provisions of this section, and otherwise prevent discrimination and cross-subsidization in a Bell operating company's dealing with its affiliate and with third parties."[48] We seek comment as to how sections 273(b)(1) and 273(g) may be made to work together in a manner that is both efficient and effective, and ask commenting parties to propose any rules necessary

[46] *See* para. 15, *supra.*

[47] 47 U.S.C. § 273(c)(2).

[48] 47 U.S.C. § 273(g).

to harmonize those sections. In addition, commenters should provide data with respect to the measurement of costs and benefits that can be ascribed to specific rules that are proposed by parties to this proceeding.

28. *Section 273(c)(3):* Under Section 273(c)(3) "[t]he Commission may prescribe such additional regulations" as may be needed to ensure that "manufacturers have access to the information with respect to the protocols and technical requirements for connection with and use of telephone exchange service facilities that a Bell operating company makes available to any manufacturing affiliate or any unaffiliated manufacturer." As noted above in the context of Section 273(c)(1), our existing network disclosure rules address the information needs of other carriers, ISPs, ESPs, and other members of the public. Our rules have not, until now, focussed specifically on the needs of manufacturers for information affecting the design of end user equipment. We request comment on whether regulations in addition to those already in place, or adopted under Section 273(c)(1), are needed to assure that manufacturers have access to the necessary information and, if so, what those regulations should be.

29. *Section 273(c)(4):* Section 273(c)(4) requires the BOCs to provide "to interconnecting carriers providing telephone exchange service, timely information on the planned deployment of telecommunications equipment." While the 1996 Act does not define "interconnecting carrier," we interpret this subparagraph to mean that a BOC must provide adequate notice to all *telecommunications* carriers providing local exchange service with whom the BOC has an interconnection arrangement.[49] We request comment on this tentative conclusion. We also request comment on (1) the level of information this section requires BOCs to disclose; and (2) how far in advance a BOC needs to disclose this information for the disclosure to be considered "timely."

30. As discussed above, Section 251(c)(5) requires incumbent local exchange carriers "to provide reasonable public notice of changes in the information necessary for the transmission and routing of services using that local exchange carrier's facilities or networks, as well as of any other changes that would affect the interoperability of those facilities and networks."[50] Accordingly, Section 251(c)(5) protects all interconnecting carriers, including those that are not providing local exchange service and that, as a result, are not entitled to notice directly under 273(c)(4). We seek comment on the relationship between the type of information required by Section 251(c)(5) and that required by Section 273(c)(4). We also

[49] "Telecommunications carrier" includes "any provider of telecommunications services, except that such term does not include aggregators of telecommunications services (as defined in section 226)." 47 U.S.C. § 153(44).

[50] The Commission recently issued an Order implementing Section 251(c)(5). *See Implementation of the Local Competition Provisions of the Telecommunications Act of 1996,* Second Report and Order and Memorandum Opinion and Order, FCC 96-333, at ¶¶ 165-260.

seek comment as to whether a BOC's Section 273(c)(4) filing could satisfy its obligation under Section 251(c)(5). In addition, we seek specific comment on whether the disclosure timetable we recently adopted to govern network disclosure under section 251(c)(5) is either necessary or sufficient to meet the "timely" standard of section 273(c)(4). We seek comment as to how the Commission might minimize the administrative burden of the notice and filing requirements while still achieving Congress' objectives in establishing these reporting and notice requirements. For example, should the Commission post all filings on its Internet site or require notice to an Internet publication newsgroup that changes have been made and that information on those changes is available? We also seek comment on whether information filed to meet Section 64.702 or 68.110 requirements or filed as part of carrier exchange access tariffs could or should satisfy the requirements of Section 273(c)(4).

### D. Section 273(d): General Manufacturing Safeguards

31. Section 273(d) addresses the competitive problems that are presented by standards setting entities and organizations, and by entities and organizations that "certify" equipment, software, and/or protocols. The process by which "standards" are set, and the process by which "certification" occurs, may present opportunities for anticompetitive behavior. These processes also present opportunities for slowing the implementation of technical innovation in the provision of telecommunications equipment, CPE, network services, and more broadly, for adversely affecting those sectors of the United States economy that rely upon telecommunications services, other network services, telecommunications equipment, and CPE. Extensive literature addressing many of these issues has been developed in the field of economics and commenting parties are referred to that literature[51] for background material as they prepare comments in response to this NPRM.

32. Standards setting can occur by fiat where, for example, a dominant provider of network services (such as local exchange services) prescribes technical requirements or protocols for interconnection with its network, or where the Federal Government establishes a standard.[52] Standards can also be set consensually, through industry forums, or through formal bodies that work to develop consensus in the adoption of standards.[53] In other contexts, standards may emerge even without explicit coordination (*e.g.*, through the decisions

---

[51] *See, e.g.*, Symposium, Network Externalities: Katz, Michael L. and Carl Shapiro, *Systems Competition and Network Effects*; Besen, Stanley M. and Joseph Farrell, *Choosing How to Compete: Strategies and Tactics in Standardization*; Liebowitz, S.J. and Stephen E. Margolis, *Network Externality: An Uncommon Tragedy*, J. OF ECON. PERSP., Spring 1994, at 93.

[52] *See, e.g.*, Besen, Stanley, and Garth Saloner, "The Economics of Telecommunications Standards," *In Changing the Rules: Technological Change, International Competition and Regulation in Communications*, ed. R. Crandall, K. Flamm, Brookings Institution at 209-220 (1989).

[53] *See, e.g., id.* at 183-89.

of market participants).[54] Subsection 273(d) addresses competitive concerns in the standards setting process, and with respect to product certification for telecommunications equipment and customer premises equipment.[55]

33. Section 273(d) limits the manufacturing activities of standard-setting organizations.[56] Section 273(d) addresses three types of activities: standards development; industry-wide generic requirements development; and certification of telecommunications equipment and customer premises equipment.

34. Section 273(d)(8) defines "certification,"[57] "generic requirements"[58] and "industry-wide."[59] We tentatively conclude that these and the other definitions contained in Section 273(d)(8) are complete and self-explanatory, but seek comment as to whether any clarifications are required. While Section 273(d)(8) defines "accredited standards development organization,"[60] neither Section 273(d)(8), nor any other section of the Act defines "standards." We seek comment on how "standards" should be defined for purposes of

---

[54] *See generally, id.* at 193-97 and references cited therein.

[55] *See, e.g.,* 47 U.S.C. § 273(d)(4)(C) (standard-setting entities that are not accredited standards development organizations shall "not undertake any actions to monopolize or attempt to monopolize the market for such services").

[56] *See* paras. 49-57, *infra.*

[57] "The term 'certification' means any technical process whereby a party determines whether a product, for use by more than one Local Exchange Carrier, conforms with the specified requirements pertaining to such product." 47 U.S.C. § 273(d)(8)(D). Certification here pertains to the private sector process of determining that equipment is in compliance with voluntary standards. *Cf.* para. 61, *infra.*, discussing FCC certification and registration under Parts 15 and 68 respectively. Certification in that context means the process by which the Commission determines that the mandatory standards set forth in Parts 15 and 68 are complied with by equipment manufacturers. These mandatory standards ensure that the public switched network is not harmed when parties attach customer premises equipment to it.

[58] "The term 'generic requirement' means a description of acceptable product attributes for use by local exchange carriers in establishing product specifications for the purchase of telecommunications equipment, customer premises equipment and software integral thereto." 47 U.S.C. § 273(d)(8)(B).

[59] "The term 'industry-wide' means activities funded by or performed on behalf of local exchange carriers for use in providing wireline telephone exchange service whose combined total of deployed access lines in the United States constitutes at least 30 percent of all access lines deployed by telecommunications carriers in the United States as of the date of enactment of the Telecommunications Act of 1996." 47 U.S.C. § 273(d)(8)(C).

[60] "The term 'accredited standards development organization' means an entity composed of industry members which has been accredited by an institution vested with the responsibility for standards accreditation by the industry." 47 U.S.C. § 273(d)(8)(E).

implementation of the 1996 Act to ensure that standards processes are open and accessible to the public. By establishing a clear definition of the term "standard," we seek (1) to clarify for manufacturers, BOCs, Bellcore and other interested parties the scope of those sections of the 1996 Act that address standards development; and (2) to facilitate compliance with standards development regulations. We also seek to understand better the possible ways that we may distinguish among different types of activities that might be characterized as standards setting activities under Section 273(d). We request comment as to the generic and conceptual distinctions among different types of standards. For example, generic distinctions might be based on the type of entity creating the standard. Thus, it might be possible to distinguish between accredited standards (*i.e.*, those standards developed by an accredited standards development organization, such as Committee T1) and "de facto" standards (*i.e.*, those standards not developed by an accredited standards development organization). "De facto" standards might further be separated into "de facto" standards (1) created by a group of interested parties seeking to promote interoperability; (2) imposed upon an industry by a dominant entity or dominant entities; or (3) adopted without any explicit coordination by market participants that independently select the same or similar standards. On a conceptual level, we seek to understand the role of these different types of standards within the industry and their relative impact on manufacturing competition. We seek comment as to the meaning of the term "industry" as used in this section. Comments that address the conceptual issues associated with "standards" development will assist us in developing precise rules for standards setting entities.

### 1. Section 273(d)(1): Application to Bell Communications Research or Manufacturers

35. Bell Communications Research, Inc., ("Bellcore") was established on January 1, 1984, under the Plan of Reorganization as part of the divestiture of AT&T. Originally, called the Central Services Organization and consisting primarily of former Bell Laboratories employees, Bellcore was established to give support to the newly formed regional Bell Operating Companies in a manner similar to that which had been provided to AT&T by Bell Laboratories.[61] Today, Bellcore is the predominant source of industry-wide generic requirements; it conducts extensive technical certification of telecommunications equipment and it is a leading contributor and participant in standards developed by accredited standards development organizations.[62] Since its creation, Bellcore has been owned and controlled

[61] *United States v. Western Electric Co.*, Civil Action No. 82-0192, Plan of Reorganization, filed December 16, 1982, at 336; *see United States v. Western Electric*, 569 F. Supp. 1057, 1113-1118 (D.D.C. 1983) (approving creation of Central Services Organization proposed in Plan of Reorganization), *aff'd sub nom. California v. United States*, 464 U.S. 1013 (1983).

[62] Bellcore indicates that, in 1996, its budget exceeds $1 billion and it employs nearly 6,000 people. Over 4000 of these employees were "highly trained and experienced engineers and scientists who provide a critical mass of telecommunications expertise and resources." These employees make Bellcore "unique[] in its ability to

jointly by the RHCs. The RHCs, however, have recently announced their agreement to sell Bellcore to Science Applications International Corporation ("SAIC"), a large defense contractor.[63]

36. Currently, Bellcore plays an extensive role in setting generic requirements and standards and performing product certification for equipment used in telecommunications networks. Bellcore claims that it created the advanced intelligent network ("AIN") concept, made national Integrated Services Digital Network ("ISDN") service a reality, and provides the tools for the planning, design and operation of global standards for Synchronous Optical Network ("SONET") and Asynchronous Transfer Mode ("ATM").[64] In each of these fundamental areas, AIN, ISDN, ATM, SONET, and other key areas such as Common Channel Signaling (CCS), Personal Communications Services (PCS) and Automatic Message Accounting (AMA), Bellcore sets the vast majority of industry-wide generic requirements.[65] Bellcore also provides technical analysis through laboratory and in-field testing to ensure that network elements meet these requirements. Finally, Bellcore plays a leading role in industry forums such as the ATM Forum and in the development of standards by accredited standards development organizations. Bellcore assumes this role through technical contributions and its leadership of organizations that develop accredited standards.[66] Additionally, Bellcore states that it plays a key role in helping to develop network standards for the evolution of a new national information infrastructure.[67]

37. Section 273(d) limits the circumstances under which Bellcore or any successor entity or affiliate may manufacture telecommunications equipment or CPE. Section 273(d)(1)(B) prohibits Bellcore from "manufacturing telecommunications equipment or customer premises equipment *as long as it is an affiliate of more than 1 otherwise unaffiliated*

---

provide end-to-end solutions for its customers." In addition, Bellcore's patent portfolio contains more than 680 domestic and foreign patents. *See* Bellcore Ownership in Transition, undated briefing materials received Dec. 4, 1996. We will place a copy of these briefing materials in the docket file of this proceeding.

[63] *Bellcore Owners Sell Business to Defense Contractor*, COMMUNICATIONS DAILY, Nov. 22, 1996, at 1.

[64] *See* Bellcore Ownership in Transition.

[65] For example, Bellcore provides over thirty generic requirements documents that provide requirements for AIN. These documents specify requirements for switching systems, signaling control points, signaling transfer points, operations systems and other network components. Bellcore, *1995 Catalog of Technical Information*, at 8-13.

[66] Members of the technical staff at Bellcore have served as the Chairperson of Committee T1 for over eight years, now lead the ATM Forum, and continue to serve in other leadership positions within accredited standards development organizations and industry forums.

[67] Bellcore, *1995 Catalog of Technical Information*, at 229.

*Bell operating company* or successor or assign of any such company."[68] With respect to this statutory phrase, we note that many of the BOCs are commonly owned or controlled by a single RHC. Such BOCs would appear to meet the 1996 Act's definition of "affiliates."[69] Accordingly, we tentatively conclude that Section 273(d)(1)(B) prohibits Bellcore from manufacturing telecommunications equipment or CPE only as long as it is (1) affiliated with two or more otherwise unaffiliated RHCs; (2) affiliated with two or more BOCs that are not under the ownership or control of the same RHC, and are not otherwise affiliated; or (3) affiliated with an RHC and a BOC that is not otherwise affiliated with that RHC. We seek comment on this tentative conclusion.

38. Section 273(d)(1)(A) provides that Bellcore "shall not be considered a [BOC] or a successor or assign of a BOC at such time as it is no longer an affiliate of any [BOC]."[70] Based on the limited information before us,[71] we tentatively conclude that, if the announced sale of Bellcore to SAIC were eventually to be consummated, under Section 273(d)(1)(A), Bellcore would no longer be considered a BOC, a BOC affiliate, or a BOC successor or assign. As such, we tentatively conclude that it would be permitted to begin manufacturing telecommunications equipment and CPE in accordance with Sections 273(d)(1)(B) and 273(d)(3). We seek comment on these tentative conclusions, including specific comment on these and other implications of Bellcore's sale.

### 2. Section 273(d)(2): Proprietary Information

39. Section 273(d)(2) provides that: "[a]ny entity which establishes standards for telecommunications equipment or customer premises equipment, or generic network requirements for such equipment, or certifies telecommunications equipment or customer premises equipment shall be prohibited from releasing or otherwise using any proprietary information, designated as such by its owner, in its possession as a result of such activity, for any purpose other than purposes authorized in writing by the owner of such information, even after such entity ceases to be so engaged."[72]

40. We seek to clarify to which entities this section should apply, how Section

---

[68] Section 273(d)(1)(B) (emphasis supplied). This subsection further states that "[n]othing in this subsection prohibits Bell Communications Research, Inc., or any successor entity, from engaging in any activity in which it is lawfully engaged on the date of enactment of the Telecommunications Act of 1996." 47 U.S.C. § 273(d)(1).

[69] *See* note 20, *supra.*

[70] 47 U.S.C. § 273(d)(1)(A).

[71] *Bellcore Owners Sell Business to Defense Contractor*, COMMUNICATIONS DAILY, Nov. 22, 1996, at 1.

[72] 47 U.S.C. § 273(d)(2).

273(d)(2) should be enforced, and what impact this section may have on accredited standards development organizations and industry forums and accordingly seek comment on these issues. While Section 273(d)(4) sets procedures for use by "any entity that is not an accredited standards development organization and that establishes industry-wide standards," Section 273(d)(2), on its face applies to "*any* entity that establishes standards." A comparison of the two provisions suggests that the term ""any entity that establishes standards"" encompasses a broader range of entities than does Section 273(d)(4). Specifically, we tentatively conclude that Section 273(d)(2) applies to all entities that develop standards, and includes entities that create "de facto" standards. We seek comment on the extent to which Section 273(d)(2) also applies to ISO 9000 certification[73] or interoperability testing in general. We also seek comment on the extent to which this section applies to BOCs' or other carriers' development of internal interfaces and protocols that might or might not be adopted more widely.[74] We also tentatively conclude that, because Section 273(d)(2) uses the terms "standards" or "generic requirements" rather than "industry-wide standards," or "industry-wide generic requirements," this section applies to the establishment of *any* standard or requirement, not just those that are industry-wide. We seek comment on the validity of these tentative conclusions. Similarly, we seek comment on the types of certification activities that are encompassed by Sections 273(d)(2), Section 273(d)(3), and Section 273(d)(4), including comment on possible differences in the scope of certification activities encompassed by each.

41. In addition, we seek specific comment as to whether, and if so, how, Section 273(d) applies to the activities of industry forums such as the ATM Forum[75] or the National ISDN User's Forum.[76] The work of these forums can be characterized in a variety of ways.

---

[73] The ISO 9000 Series, published by the International Standards Organization, is a set of three generic standards (ISO 9001, ISO 9002, and ISO 9003) that "provide quality assurance requirements and quality management guidance." ISO 9001 is a quality assurance standard for companies involved in the design, testing, manufacture, delivery, or service of products. ISO 9002 covers manufacturing and installation. ISO 9003 addresses product testing. Newton, Harry, NEWTON'S TELECOM DICTIONARY 328 (11th Ed. 1996).

[74] In this case, by "internal interfaces and protocols," we intend to include both (1) those standards that are used only internally by the BOCs and are otherwise transparent to network interconnectors and/or users, at least in the absence of the unbundling or sale of individual network elements; and (2) those standards that are adopted by the BOCs on an "individual" basis, but which may nevertheless have the effect of foreclosing other alternative standards by virtue of the BOCs' substantial size and market share.

[75] The ATM Forum is an international non-profit organization formed with the objective of accelerating the use of ATM products and services through a rapid convergence of interoperability specifications. In addition, the Forum promotes industry cooperation and awareness. The ATM Forum consists of over 700 member companies, and it remains open to any organization that is interested in accelerating the availability of ATM-based solutions.

[76] The North American ISDN Users' Forum (NIUF) objectives are to provide users the opportunity to influence developing ISDN technology to reflect their needs; to identify ISDN applications, develop implementation requirements and facilitate their timely, harmonized, and interoperable introduction; and to solicit

For example, the ATM Forum maintains a World Wide Web page in which it describes its work product as "specifications." The Telecommunications Industry Association (TIA) characterizes the ATM Forum as a "standards development organization,"[77] while the Network Reliability Council states that industry forums, like the ATM Forum, "use and influence standards to create user application profiles of standards and implementation agreements based on options approved in standards."[78] We seek comment on whether the work product of these types of industry forums constitutes either a "standard" or a "generic requirement." Additionally, we seek comment as to whether these forums, if they have some relationship with "accredited standards development organizations" should themselves be considered "accredited standards development organizations" for the purpose of this section of the Act. We also seek comment as to what type of relationship, if any, should lead to these industry forums being classified as "accredited" for the purposes of Section 273(d), and how "accredited" should be defined for the purpose of administering Section 273. We encourage commenters to address the advantages and disadvantages of interpreting this section to include industry forums as standards setting entities within the meaning of Section 273(d) of the Act, and further encourage commenters to address the impact on members of these groups of a finding that they are covered by Section 273(d).

42. We also seek comment on the extent to which the preceding interpretations would require accredited standards organizations and industry forums to alter their existing practices and procedures for protecting proprietary information to comply with this provision of the Act, and the projected costs and benefits of such alterations. We recognize that the protection of proprietary information is vital to continued development of new technology and innovative network advances. Assuming accredited standards development organizations and industry forums must comply with Section 273(d)(2), we seek comment on and draft language for any rules that a commenting party asserts we should establish to mitigate any adverse effects of improper disclosure.

### 3. Section 273(d)(3): Manufacturing Safeguards

43. Section 273(d)(3) has three parts. In general, Section 273(d)(3)(A) restricts the ability of an entity to manufacture and certify any particular class of telecommunications

---

user, product provider, and service provider participation in the process. In 1988, the National Institute of Standards and Technology (NIST) collaborated with industry to establish the NIUF. Members of NIST's Computer Systems Laboratory have served as the chair of the forum and have hosted the NIUF Secretariat. Over 300 organizations participate in the NIUF. The NIUF is open to all interested parties, product providers, and service providers.

[77] TIA Standards and Technology Annual Report 1995. We will place a copy of this document in the docket file of this proceeding.

[78] Network Reliability Council Increased Interconnection Task Group II Report (Dec. 1, 1995) at 57.

equipment or CPE and requires that such manufacturing be performed only through an affiliate separate from the certifying entity. Sections 273(d)(3)(B) and 273(d)(3)(C) impose specific separation requirements on the manufacturing affiliate and the certifying entity, respectively. Under Section 273(d)(3)(B), the entity's manufacturing affiliate must maintain books, records and accounts separate from those of the certifying affiliate, must not engage in joint manufacturing activities with the certifying entity, and must have segregated facilities and separate employees. Under Section 273(d)(3)(C), a certifying entity must not discriminate in favor of its manufacturing affiliate, must not disclose unaffiliated manufacturers' proprietary information without authorization, and must not permit any employee engaged in certification activities to participate in joint equipment sales or marketing activities with the certifying entity's manufacturing affiliate. We tentatively conclude that, if the sale of Bellcore to SAIC were to be consummated, Bellcore would be permitted to engage in manufacturing activities, but would need to comply with the structural and accounting safeguards of Section 273(d)(3). We seek comment on this tentative conclusion.

44. Section 273(d)(3)(A) states that "any entity which certifies telecommunications equipment and customer premises equipment manufactured by an unaffiliated entity shall only manufacture a particular class of telecommunications equipment or customer premises equipment for which it is undertaking or has undertaken, during the previous 18 months, certification activity for such class of equipment through a separate affiliate."[79] While the terms "telecommunications equipment" and "customer premises equipment" are defined in the Act,[80] "class" is not defined by the Act. This term must be clearly defined so that certification entities know what equipment they may manufacture directly. We tentatively conclude that we should define specific *classes* of equipment and that these *classes* should be based on existing industry classifications to the extent that they exist. We request comment that describes classifications currently used within the industry and proposed definitions for each class of equipment. We also seek comment on the practical effects of defining "classes" broadly, versus narrowly. On the one hand, defining broad classes, such as "Network Switching Equipment" or "Network Transmission Equipment" would greatly reduce the ability of certification entities to manufacture equipment directly. For example, if we defined "Network Transmission Equipment" as a "class," this class would include many types of network components such as channel banks, multiplexing equipment, fiber optic couplers, and even fiber optics or copper wire. Adopting such a definition of "class" would mean that an entity certifying only channel banks would not be able to manufacture these other items directly because they would fall into the same class. On the other hand, a narrow definition of "classes of telecommunications equipment" may only minimally affect certifying entities, but fail to provide the safeguards Congress intended in enacting this section.

[79] 47 U.S.C. § 273(d)(3)(A).

[80] *See* notes 21 and 22, *supra.*